

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Maple Landmark Woodcraft

Vermont Manufacturing Extension Center

#### Maple Landmark Woodcraft Goes Against The Grain By Implementing Cellular Manufacturing

##### Client Profile:

Maple Landmark Woodcraft is located in historic Middlebury, Vermont and employs 33 people. Founded in 1979, the company manufactures small wood products, toys, and giftware.

##### Situation:

One of Maple Landmark Woodcraft (MLW)'s signature products is a line of letter-shaped wooden train cars (NameTrains). The company's traditional manufacturing and assembly processes required five days of process time for a single train, due to long drying times for many coats of finish and handwork to attach wheels and magnets. The company generally ships within 24 hours of receiving an order, a system complicated by a highly seasonal sales curve. Therefore, reliance on finished goods and inventory remained an expensive, yet necessary, part of MLW's formula. The company decided to try and solve some of these problems, and contacted the Vermont Manufacturing Extension Center (VMEC), a NIST MEP network affiliate, for assistance.

##### Solution:

VMEC told MLW about a new adhesive now available on the market that created the opportunity for changes in the production process. The company was able to combine assembly of wheels and magnets into a single line, which VMEC analyzed and helped configure into a new cell.

As part of the cell's set-up process, VMEC helped MLW balance its work flow to make it flexible enough to function with varying staffing levels. VMEC identified and standardized the best methods to facilitate hourly rotation of staff positions within the cell without compromising the pace of assembly. These methods allow cell output to be measured on an hourly basis. Now the final assembly steps can be completed entirely within the 24 hour shipping window. This diminished the importance of a finished goods inventory. Assembly is now driven by a visual system and finished inventory can be maintained at a lower level to cover daily variations in orders.

##### Results:

Created a new work cell.

Reduced the number of times the product is handled from 15 to 12.

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Eliminated one full day of process time.  
Decreased labor requirements for product assembly by 50 percent.  
Eliminated ergonomically-related employee issues.  
Maintained on-time delivery at over 95 percent.  
Created one new job.

### **Testimonial:**

"Ever since I was introduced to lean concepts [by the Vermont Manufacturing Extension Center] I have been a huge fan of them. I've sometimes been skeptical about how they could work for us but finally I decided to delve deeper and it has been fun watching these changes develop positive impacts. I've even hired a Director of Lean Manufacturing to keep these concepts at the forefront of our process development."

Mike Rainville, President